AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A gateway adapter, ~~including~~ comprising:

   a) a PBX interface for connection to a PBX system entity to communicate with the PBX system entity using a PBX protocol, the PBX system entity establishing a functional domain within which call sessions can originate and terminate;

   b) a network interface for communicating with a packet switched network entity establishing a packet switched network domain; and

   c) an interoperation functional unit associated with said PBX interface and with said network interface, said interoperation functional unit being operative to effect manipulations on data received by said interfaces from the PBX system entity and the packet switched network entity, respectively, to allow the PBX system entity and the packet switched network entity to interoperate, and wherein said interoperation functional unit is responsive to communication control data from a remote network services unit operable for providing call processing services for a call session involving the PBX system entity.

2. (Original) A gateway adapter as defined in claim 1, wherein the PBX protocol is a protocol for a circuit-switched PBX system entity.

3.   (Original) A gateway adapter as defined in claim 2, wherein the PBX system entity has a plurality of trunk ports, said gateway adapter being operative to simultaneously maintain a plurality of media signals exchange transactions with the PBX domain through respective external telephone line ports.

4.   (Original) A gateway adapter as defined in claim 3, wherein said gateway adapter is operative to generate control data in the PBX protocol.

5.   (Original) A gateway adapter as defined in claim 4, wherein the control data in the PBX protocol is output from said PBX interface.

6.   (Original) A gateway adapter as defined in claim 4, wherein said interoperation functional unit includes a plurality of media gateways, each media gateway being operative to convert media signals received from the packet switched network in a format suitable for application to one of the external telephone line ports.

7.   (Original) A gateway adapter as defined in claim 6, wherein the media signals convey audio information.

8.   (Original) A gateway adapter as defined in claim 7, wherein the media signals received

from the packet switched network include data packets.

9.   (Original) A gateway adapter as defined in claim 7, wherein each media gateway is

operative to convert media signals at one of the external telephone line ports into data packets

suitable for transmission through the packet switched network.

10. - 11. (Canceled).

12.   (Currently Amended) A gateway adapter as defined in claim 1 [[11]], wherein the call

session has a flow of media signals, said interoperation functional unit being operative to

process the media signals at least in part in dependence upon the communication control data

from the network services unit.

13.   (Original) A gateway adapter as defined in claim 3, wherein said interoperation

functional unit includes a device emulator, said device emulator is operative to communicate

with a remote network services unit through said network interface and emulate a device

different from said gateway adapter.

14.   (Original) A gateway adapter as defined in claim 13, wherein the device different from said gateway adapter is a telephone terminal of a first type.

15.   (Original) A gateway adapter as defined in claim 14, wherein the PBX system entity is adapted to connect to a telephone terminal of a second type that is different from the telephone terminal of the first type.

16.   (Original) A gateway adapter as defined in claim 3, wherein said gateway adapter is operative to maintain a plurality of call sessions simultaneously, each call session having media signals travelling on a path that extends outside the functional domain established by the PBX system entity, said gateway adapter being further operative to direct the media signals of a selected call session from the plurality of call sessions to a certain telephone terminal connected to the PBX system entity.

17.   (Original) A gateway adapter as defined in claim 16, wherein said gateway adapter is responsive to a control signal from the certain telephone terminal to direct to the certain telephone terminal the media signals of a call session from the plurality of call sessions other than the selected call session.

18. (Currently Amended) A combination, comprising:

    a) a circuit switched PBX system entity for connection to a plurality of telephone terminals; and

    b) a gateway adapter associated with said PBX system entity, said gateway adapter allowing at least one of the telephone terminals to establish a call session with a remote entity residing in a packet switched network, and wherein said gateway adaptor is responsive to communication control data from a remote network services unit operable for providing call processing services for a call session involving the PBX system entity.

19. - 20. (Canceled).

21. (Currently Amended) A combination as defined in claim 18 [[20]], wherein said gateway adapter includes comprises:

    a) a PBX interface for connection to said PBX system entity to communicate with said PBX system entity using a PBX protocol, said PBX system entity establishing a functional domain within which call sessions can originate and terminate;

    b) a network interface for communicating with the packet switched network entity establishing a packet switched network domain; and

c)   an interoperation functional unit associated with said PBX interface and with said

network interface, said interoperation functional unit being operative to effect

manipulations on data received by said interfaces from said PBX system entity

and the packet switched network entity, respectively, to allow said PBX system

entity and the packet switched network entity to interoperate.

22.   (Original) A combination as defined in claim 21, wherein said PBX system entity has

a plurality of trunk ports, said gateway adapter is operative to simultaneously maintain a

plurality of media signals exchange transactions with the PBX domain through respective

external telephone line ports.

23.   (Original) A combination as defined in claim 22, wherein said interoperation functional

unit includes a plurality of media gateways, each media gateway being operative to convert

media signals received from the packet switched network in a format suitable for application

to one of the external telephone line ports.

24.   (Original) A combination as defined in claim 23, wherein the media signals convey

audio information.

25.   (Original) A combination as defined in claim 24, wherein each media gateway is operative to convert media signals at one of the trunk ports into data packets suitable for transmission through the packet switched network.

26.   (Original) A combination as defined in claim 21, wherein said interoperation functional unit includes a device emulator, said device emulator being operative to communicate with the remote network services unit through said network interface and emulate a device different from said gateway adapter.

27.   (Original) A combination as defined in claim 26, wherein the device different from said gateway adapter is a telephone terminal of a first type.

28.   (Original) A combination as defined in claim 27, wherein the PBX system entity is adapted to connect to a telephone terminal of a second type that is different from the telephone terminal of the first type.

29.   (Original) A combination as defined in claim 21, wherein said gateway adapter is operative to maintain a plurality of call sessions simultaneously, each call session having media signals travelling on a path that extends outside the functional domain established by the PBX system entity, said gateway adapter being further operative to direct the media signals of a

selected call session from the plurality of call sessions to a certain telephone terminal connected to the PBX system entity.

30.   (Original) A combination as defined in claim 29, wherein said gateway adapter is responsive to a control signal from a terminal connected to said PBX system entity to direct to the certain telephone terminal the media signals of a call session from the plurality of call sessions other than the selected call session.

31.   (Original) A method for upgrading a PBX system entity operative to provide call

processing functions, said method comprising:

a)   configuring the call processing functions of said PBX system entity such that it

operates in a passthrough manner in terms of call origination and termination;

and

b)   connecting to the PBX system entity a device allowing the PBX system entity to

interoperate with a remote network services unit residing in a packet switched

network that is operative to provide call processing functions on call sessions

established through said PBX system entity.

32. (Currently Amended) A gateway adapter, ~~including~~ comprising:

    a)   a PBX interface means for connection to a PBX system entity to communicate with the PBX system entity using a PBX protocol, the PBX system entity establishing a functional domain within which call sessions can originate and terminate;

    b)   a network interface means for communicating with a packet switched network entity establishing a packet switched network domain; and

    c)   interoperation means associated with said PBX interface means and with said network interface means, said interoperation means being operative to effect manipulations on data received by said <u>PBX interface means and said network</u> interface means from the PBX system entity and the packet switched network entity, respectively, to allow the PBX system entity and the packet switched network entity to interoperate<u>, and wherein said interoperation means is responsive to communication control data from a remote network services unit operable for providing call processing services for a call session involving the PBX system entity</u>.

33.   (Currently Amended)   An apparatus for providing telephony-related services to a

plurality of telephone terminals of a first type, said apparatus comprising ~~including~~ a network

interface for exchanging signals with a remote network services unit through a packet switched

network, the apparatus implementing a device emulator to make the apparatus behave toward

the remote network services unit as a telephone terminal of a second type, wherein the second

type of telephone terminal are operable to interact with the remote network services unit, and

where the telephone terminal of the first type is different from the telephone terminal of the

second type.

34.   (Currently Amended)   An apparatus as defined in claim 33, wherein said apparatus

further comprises ~~includes~~ a gateway adapter, ~~including~~ comprising:

a)   a PBX interface for connection to a PBX system entity to communicate with the

PBX system entity using a PBX protocol, the PBX system entity establishing a

functional domain within which call sessions can originate and terminate;

b)   a network interface for communicating with a packet switched network entity

establishing a packet switched network domain; and

c)   an interoperation functional unit associated with said PBX interface and with said

network interface, said interoperation functional unit being operative to effect

manipulations on data received by said interfaces from the PBX system entity

and the packet switched network entity, respectively, to allow the PBX system

entity and the packet switched network entity to interoperate, and wherein said

interoperation functional unit is responsive to communication control data from a remote network services unit operable for providing call processing services for a call session involving the PBX system entity.

35.   (Original) An apparatus as defined in claim 34, wherein the PBX protocol is a protocol for a circuit-switched PBX system entity.

36.   (Original) An apparatus as defined in claim 35, wherein the PBX system entity has a plurality of trunk ports, said gateway adapter is operative to simultaneously maintain a plurality of media signals exchange transactions with the PBX domain through respective external telephone line ports.

37.   (Original) An apparatus as defined in claim 36, wherein said gateway adapter is operative to generate control data in the PBX protocol.

38.   (Original) An apparatus as defined in claim 37, wherein the control data in the PBX protocol is output from said PBX interface.

39.   (Currently Amended) An apparatus as defined in claim 37 [[40]], wherein said interoperation functional unit includes a plurality of media gateways, each media gateway being

operative to convert media signals received from the packet switched network in a format

suitable for application to one of the trunk ports.

40.   (Original) An apparatus as defined in claim 39, wherein the media signals convey audio

information.

41.   (Original) An apparatus as defined in claim 40, wherein the media signals received from

the packet switched network include data packets.

42.   (Currently Amended) An apparatus as defined in claim 40 [[43]], wherein each media

gateway is operative to convert media signals at one of the trunk ports into data packets suitable

for transmission through the packet switched network.

43. - 44. (Canceled).

45.   (Currently Amended) An apparatus as defined in claim 34 [[44]], wherein the call

session has a flow of media signals, said interoperation functional unit being operative to

process the media signals at least in part in dependence upon the communication control data

from the network services unit.

46.   (Original) An apparatus as defined in claim 45, wherein the call session is established

between a first and second telephone terminals connected to the PBX system entity, said

gateway adapter being operative to exchange media signals with the first telephone terminal

through a first one of the trunk ports and exchange media signals with the second telephone

terminal through a second one of the trunk ports.

47.   (Original) An apparatus as defined in claim 46, wherein the media signals of the call

session pass through said network interface.

48.   (Original) An apparatus as defined in claim 46, wherein the media signals of the call

session do not pass through said network interface.

49.   (Original) An apparatus as defined in claim 36, wherein said interoperation functional

unit includes a device emulator, said device emulator is operative to communicate with a remote

network services unit through said network interface and emulate a device different from said

gateway adapter.

50.   (Original) An apparatus as defined in claim 49, wherein the device different from said

gateway adapter is a telephone terminal of a first type.

51.   (Original) An apparatus as defined in claim 50, wherein the PBX system entity is

adapted to connect to a telephone terminal of a second type that is different from the telephone

terminal of the first type.

52. (Original) An apparatus as defined in claim 36, wherein said gateway adapter is operative to maintain a plurality of call sessions simultaneously, each call session having media signals travelling on a path that extends outside the functional domain established by the PBX system entity, said gateway adapter being further operative to direct the media signals of a selected call session from the plurality of call sessions to a certain telephone terminal connected to the PBX system entity.

53. (Original) An apparatus as defined in claim 52, wherein said gateway adapter is responsive to a control signal from the certain telephone terminal to direct to the certain telephone terminal the media signals of a call session from the plurality of call sessions other than the selected call session.

54.   (Currently Amended)   An apparatus for providing telephony-related services to a plurality of telephone terminal means of a first type, said apparatus comprising ~~including~~ a network interface means for exchanging signals with a remote network services unit through a packet switched network, the apparatus implementing a device emulator means to make the apparatus behave toward the remote network services unit as a telephone terminal means of a second type, <u>wherein the second type of telephone terminal means are operable to interact with the remote network services unit, and</u> where the telephone terminal means of the first type is different from the telephone terminal means of the second type.

55.   (New) A gateway adapter as defined in claim 1, wherein the communication control data received from the remote network services unit includes an answer received from a terminal of a called party.

56.   (New) A gateway adapter as defined in claim 12, wherein the communication control data includes coding algorithm information.

57.   (New) A combination as defined in claim 20, wherein the communication control data received from the remote network services unit includes an answer received from a terminal of a called party.

58.   (New) A combination as defined in claim 20, wherein the communication control data includes coding algorithm information.

59.   (New) An apparatus as defined in claim 34, wherein the communication control data received from the remote network services unit includes an answer received from a terminal of a called party.

60.   (New) An apparatus as defined in claim 45, wherein the communication control data includes coding algorithm information.